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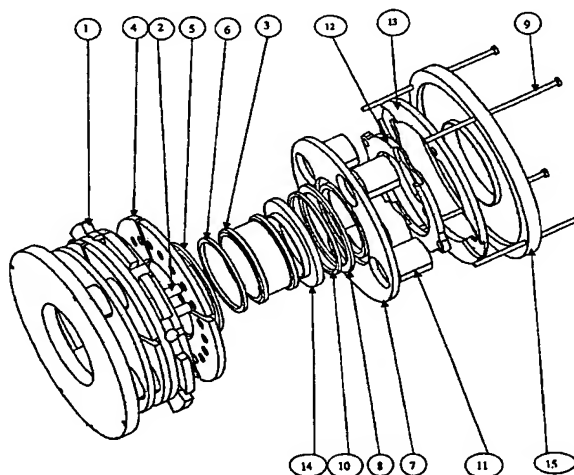
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(54) Title: A RING-SPINNING SYSTEM FOR MAKING YARN HAVING A MAGNETICALLY-ELEVATED RING



(57) Abstract: A ring-spinning system for making yarn characterized in part by the replacement of the ring traveler configuration with only one rotating, floating ring that has an eye on its inner middle surface. This rotating, floating ring with the eye thereon performs the functions previously performed by the ring traveler configuration of twisting the fibers into yarn. The ring is kept suspended in space by the magnetic levitation system of the present invention. The floating ring is elevated by a well-controlled magnetic field generated by two sets of electromagnetic coils and a set of cylindrical rare earth permanent magnets. The floating ring is rotated around its center by the effect of winding the formed yarns over a rotating spindle at the center of the ring. Sensors and a feedback system are used to control the magnetic fields produced by the electromagnetic coils to maintain the ring in its central position.

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INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER

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US CL : 310/90.5; 57/75, 98, 264, 100, 124

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

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Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
NONE

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
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C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A,P	US 6,573,628 B1 (SLOUPENSKY et al) 03 June 2003 (03.06.2003), Figures 1-3.	1-18
A	US 6,446,424 B2 (THIERRON) 10 September 2002 (10.09.2002), Figures 1-2.	1-18
A	US 5,740,666 A (YAMAGUCHI et al) 21 April 1998 (21.04.1998), Figures 1-7.	19-20

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